

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE**

LG DISPLAY CO., LTD.,	)	
	)	
Plaintiff,	)	Civil Action No. 06-726 (JJF)
	)	Civil Action No. 07-357 (JJF)
v.	)	
CHI MEI OPTOELECTRONICS	)	CONSOLIDATED CASES
CORPORATION, et al.	)	
Defendants.	)	
	)	
	)	

**CHI MEI OPTOELECTRONICS' ANSWERING  
MEMORANDUM REGARDING  
PROPOSED CLAIM CONSTRUCTIONS**

OF COUNSEL:

Morgan Chu  
Jonathan S. Kagan  
Alexander C.D. Giza  
Adam Hoffman  
Irell & Manella LLP  
1800 Avenue of the Stars, Suite 900  
Los Angeles, California 90067-4276  
(310) 277-1010

Philip A. Rovner (#3215)  
POTTER, ANDERSON & CORROON LLP  
Hercules Plaza  
1313 N. Market St.  
P.O. Box 951  
Wilmington, Delaware 19899-0951  
(302) 984-6000  
provner@potteranderson.com

*Attorneys for Defendant  
Chi Mei Optoelectronics Corporation*

Dated: September 4, 2008

TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION .....	1
II. ARGUMENT .....	1
A. CONSTRUCTIONS FOR DISPUTED TERMS IN LGD'S PATENTS .....	1
1. U.S. Patent No. 5,019,002 (JCC Ex. B).....	1
a. Interconnecting substantially all of said row lines to one another and substantially all of said column lines to one another (Claim 1) (JCC Ex. B, p. 3) .....	1
b. Resistance (Claim 1) (JCC Ex. B, p. 8) .....	3
2. U.S. Patent No. 4,624,737 (JCC Ex. A).....	4
a. Gate insulating film (Claim 1) (JCC Ex. A, p. 6) .....	4
b. Depositing on said gate electrode and substrate (Claim 1) (JCC Ex. A, p. 4).....	4
c. Without exposure to an oxidizing atmosphere/Oxidizing atmosphere (Claim 1) (JCC Ex. A, pp. 10, 11).....	5
d. Mask/source and drain electrodes serving as at least a part of the mask (Claim 1) (JCC Ex. A, pp. 19-21) .....	7
e. [A fifth step for] selectively removing said conducting film exposed on said island region [with said source and drain electrodes serving as at least a part of the mask] (Claim 1) (JCC Ex. A, p. 17) .....	8
3. U.S. Patent No. 5,825,449 (JCC Ex. C).....	10
a. Conductive layer (Claims 1, 10, 11) (JCC Ex. C, p. 2) .....	10
b. One (Claim 1) (JCC Ex. C, p. 8).....	12
c. [Wherein] one of said first and second conductive layers is connected to one of a plurality of terminals of a thin film transistor (Claim 1) (JCC Ex. C, p. 7).....	13
d. Gate pad/Source pad (Claims 10, 11) (JCC Ex. C, pp. 12, 13) .....	15

	<u>Page</u>
e. Formed on/Formed on...[substrate/layer]/On said [surface/film/layer] (Claims 1, 10, 11) (JCC Ex. C, pp. 2, 3, 4, 5, 14, 15, 17) .....	15
4. U.S. Patent Nos. 5,905,274 (JCC Ex. F); 6,815,321 (JCC Ex. G); 7,176,489 (JCC Ex. H).....	16
a. The first metal layer being wider than the second metal layer by about 1 to 4 µm ('274 patent, Claims 1, 4) (JCC Ex. F, p. 8)/The first metal layer being etched to have a width greater than a width of the second metal layer by about 1 to 4 µm ('321 Patent, Claim 16) (JCC Ex. G, p. 13)/A total width of the first metal layer being greater than a total width of the second metal layer by about 1 to 4 µm ('321 patent, Claim 7; '489 patent, Claim 1) (JCC Ex. G, p. 6; Ex. H, p. 5).....	16
b. Double-layer structure ('274 patent, Claims 1, 4) (JCC Ex. F, p. 3)/Double-layered metal gate ('321 patent, Claim 7; '489 patent, Claim 1) (JCC Ex. G, p. 4; Ex. H, p. 3).....	19
5. U.S. Patent No. 7,218,374 (JCC Exhibit I) .....	20
a. Wherein the auxiliary sealant and the main sealant are contiguous (Claims 1, 21) (JCC Ex. I, pp. 5-6) .....	20
6. U.S. Patent No. 6,803,984 (JCC Ex. E) .....	22
a. On a single production process line (Claims 1-3) (JCC Ex. E, p. 2).....	22
b. Passing the first and second substrates through [a sealing material coating/a liquid crystal dispensing] portion of the single production process line in serial order (Claim 1) (JCC Ex. E, p. 2) .....	23
B. CONSTRUCTIONS FOR DISPUTED TERMS IN CMO'S PATENTS .....	25
1. U.S. Patent No. 6,734,926 (JCC Ex. V).....	25
a. Circuit board installation (Claims 1, 8, 15, 22, 29, 36) (JCC Ex. V, pp. 2-5) .....	25
2. U.S. Patent No. 6,134,092 (JCC Ex. U).....	26

	<u>Page</u>
a. A series of point light sources (Claim 1) (JCC Ex. U, p. 1) .....	26
b. Diffusive reflective surfaces/Diffusive reflective optical cavities (Claims 1, 12, 17, 21) (JCC Ex. U, p. 2 & 6) .....	27
c. The diffusive reflective surfaces oriented relative to the series of point light sources and the waveguide so as to introduce light in regions of said waveguide between pairs of said point light sources (Claim 1) (JCC Ex. U, p. 3).....	28
d. Guide members positioned along a periphery of the optical cavity (Claim 21) (JCC Ex. U, p. 6).....	28
3. U.S. Patent No. 6,013,923 (JCC Ex. T) .....	28
a. During formation of said gate lines/during formation of said source lines (Claim 1) (JCC Ex. T, pp. 2-3).....	28
b. Shorting element (Claim 1) (JCC Ex. T, p. 2) .....	30
c. Electrically coupling said shorting elements (Claim 1) (JCC Ex. T, p. 4) .....	31
d. Protection element (Claim 1) (JCC Ex. T, p. 3).....	31
4. U.S. Patent No. 5,619,352 (JCC Ex. R) .....	32
a. A layer of a birefringent material (Claim 3) (JCC Ex. R, p. 1) .....	32
b. Tilt angle varies along an axis normal to said layer (Claim 3) (JCC Ex. R, p. 2).....	34
5. U.S. Patent No. 6,008,786 (JCC Ex. S) .....	35
a. Changing the level of gray scale data signals for at least one color relative to the other colors to a different gray scale level (Claim 1) (JCC Ex. S, pp. 2, 5, 8, 10) .....	35
b. Delaying any uncorrected gray scale signal related to the other colors for the time delay caused by said corrected gray scale data signal being corrected (Claim 1) (JCC Ex. S, pp. 4, 6, 9, 11).....	38

	<u>Page</u>
c. Driver means/Data control means/Computing means/Buffer means/Adjusting means (Claim 1) (JCC Ex. S, pp. 1-5).....	39
6. U.S. Patent No. 7,280,179 (JCC Ex. W).....	39
III. CONCLUSION.....	40

TABLE OF AUTHORITIES

	<u>Page(s)</u>
<b>Cases</b>	
<i>AGG Indus. Inc. v. Cardinal IG Co.</i> , 239 F.3d 1239 (Fed. Cir. 2001).....	31, 36
<i>AK Steel Corp. v. Sollac and Ugine</i> , 344 F.3d 1234 (Fed. Cir. 2003).....	36
<i>Amgen v. Roussel</i> , 314 F.3d 1313 (Fed. Cir. 2003).....	6
<i>Application of Teague</i> , 254 F.2d 145 (Bd. Cust. & Pat. App. 1958) .....	13
<i>Baldwin Graphic Sys. Inc. v. Siebert, Inc.</i> , 512 F.3d 1338 (Fed. Cir. 2008).....	10
<i>CollegeNet, Inc. v. ApplyYourself, Inc.</i> , 418 F.3d 1225 (Fed. Cir. 2005).....	31, 36
<i>Cordis Corp. v. Medtronic Ave, Inc.</i> , 511 F.3d 1157 (Fed. Cir. 2008).....	14
<i>DSW, Inc. v. Shoe Pavilion, Inc.</i> , No. 2008-1085, 2008 WL 3842898 (Fed. Cir. Aug. 19, 2008) .....	34
<i>Elbex Video, Ltd. V. Sensormatic Elecs. Corp.</i> , 508 F.3d 1366 (Fed. Cir. 2007).....	34
<i>Elekta Instrument S.A. v. O.U.R. Sci. Int'l, Inc.</i> , 214 F.3d 1302 (Fed. Cir. 2000).....	28
<i>Embrex, Inc. v. Serv. Eng'g Corp.</i> , 216 F.3d 1343 (Fed. Cir. 2000).....	40
<i>Halliburton Energy Serv., Inc. v. M-I LLC</i> , 514 F.3d 1244 (2008).....	6
<i>Honeywell Int'l, Inc. v. Int'l Trade Comm'n</i> , 341 F.3d 1332 (Fed. Cir. 2003).....	6
<i>Invitrogen Corp. v. Clontech Labs., Inc.</i> , 429 F.3d 1052 (Fed. Cir. 2005).....	6

	<u>Page(s)</u>
<i>JVW Enters., Inc. v. Interact Accessories, Inc.,</i> 424 F.3d 1324 (Fed. Cir. 2005).....	24
<i>Kothmann &amp; Kothmann, Inc. v. Trinity Indus., Inc.,</i> 287 F. Supp. 2d 673 (S.D. Tex. 2003).....	13
<i>Lampi Corp. v. Am. Power Prods., Inc.,</i> 228 F.3d 1365 (Fed. Cir. 2000).....	13
<i>Markman v. Westview Instruments, Inc.,</i> 52 F.3d 967 (Fed. Cir. 1995).....	27
<i>Moleculon Research Corp. v. CBS, Inc.,</i> 793 F.2d 1261 (Fed. Cir. 1986).....	13, 31
<i>Phillips v. AWH Corp.,</i> 415 F.3d 1303 (Fed. Cir. 2005).....	28, 32
<i>Rambus Inc. v. Infineon Techs. Ag,</i> 318 F.3d 1081 (Fed. Cir. 2003).....	32, 34
<i>ResQNet.com, Inc. v. Lansa, Inc.,</i> 346 F.3d 1374 (Fed. Cir. 2003).....	33
<i>SciMed Life Systems, Inc. v. Advanced Cardiovascular Sys., Inc.,</i> 242 F.3d 1337 (Fed. Cir. 2001).....	36
<i>Teleflex, Inc. v. Ficosa N. Am. Corp.,</i> 299 F.3d 1313 (Fed. Cir. 2002).....	31
<i>TM Patents, L.P. v. Int'l Bus. Machs.,</i> 72 F. Supp. 2d 370 (S.D.N.Y. 1999).....	13
<i>Ventana Med. Sys., Inc. v. Biogenex Labs., Inc.,</i> 473 F.3d 1173 (Fed. Cir. 2006).....	2
<i>Vitronics Corp. v. Conceptronic, Inc.,</i> 90 F.3d 1576 (Fed. Cir. 1996).....	29, 37
<b><u>Statutes</u></b>	
35 U.S.C. § 112.....	21, 38

## I. INTRODUCTION

Chi Mei Optoelectronics Corporation and Chi Mei Optoelectronics USA (collectively, "CMO") submit this answering brief addressing LGD's and AUO's opening claim construction briefs. As before, CMO addresses only the patents that LGD has asserted against CMO or that CMO has asserted against LGD. CMO does not address AUO's patents.

## II. ARGUMENT

### A. CONSTRUCTIONS FOR DISPUTED TERMS IN LGD'S PATENTS

#### 1. U.S. Patent No. 5,019,002 (JCC Ex. B)

- a. **Interconnecting substantially all of said row lines to one another and substantially all of said column lines to one another<sup>1</sup> (Claim 1) (JCC Ex. B, p. 3)**

Interconnecting: In its brief, LGD reveals that its proposed construction "electrically connecting with conductive material" is intended to encompass connecting row and column lines with not only conductors, but also semiconductors. LGD Br. at 7-8. LGD is effectively asking the Court to discard its own previous construction of "interconnecting" and broaden it from "electrically connecting with conductors" to "electrically connecting with conductors or semiconductors." There is no basis for this unwarranted claim expansion. To the contrary, the '002 specification indicates that the ESD guard ring is "preferably formed from a low resistance metal, such as an aluminum alloy" (7:30-31), and since the interconnections between the row and column lines perform the same function as the ESD guard ring, one of skill in the art would understand the interconnection to be made of the same material. Nowhere does the specification even remotely suggest interconnecting the row and column lines with a semiconductor or any other similar material. While the patentee was clearly aware of semiconductors, and even suggested using such material in the transistor channel region (5:7-10), the patentee never contemplated using it as a conductor to short lines together. In addition, LGD's attempt to use the file history to expand the scope of the '002 patent claims is unavailing.

---

<sup>1</sup> LGD misquotes the claim language of claim 1 in heading II.A.1 of its opening brief. The correct language appears here.

The '536 patent, in particular, connects adjacent row and column lines using a resistance, not with a "short" or "line" or "jumpers." *See, e.g.*, 5:65-68; 8:4-8. LGD's attempt to upend the Court's prior construction and enlarge the scope of the '002 patent is without support and should be rejected.

Substantially all: For this limitation, LGD essentially argues that "substantially all" means "substantially all or all." LGD Br. at 8-9. LGD cites *Ventana Med. Sys., Inc. v. Biogenex Labs., Inc.*, 473 F.3d 1173, 1180-82 (Fed. Cir. 2006) as support, but the *Ventana* opinion is inapposite. In *Ventana*, the defendant argued that "dispensing" was limited to "direct dispensing," because the specification compelled a narrow construction. *Id.* at 1180. The Federal Circuit disagreed, concluding that limiting the claims to "direct dispensing" would improperly confine the claims to an embodiment in the specification. *Id.* at 1182. Here, CMO's and AUO's proposed constructions are true to the express claim language. No attempt is made to confine the claims to an embodiment in the specification—CMO's and AUO's constructions appropriately require that the claims be confined to the language that the patentee chose.

To one another: LGD argues that the phrase "to one another" should be construed as "to at least one other" and cites Figure 4 in support. LGD Br. at 9. Figure 4, however, does not show an example of "interconnecting substantially all of said row lines to one another and substantially all of said column lines to one another." Instead, Fig. 4 merely shows the implementation of a 2x2 subpixel configuration, and thus relates to the claim term "forming a pattern of pixels." 5:44-45 ("Referring now to FIG. 4, a subpixel matrix display...."); 5:46-6:59. The connections shown in Fig. 4 for creating the redundant subpixels cannot be the interconnections of substantially all row and column lines for two reasons. First, it makes no sense to interconnect substantially all rows or columns of a display to implement redundant subpixels, because the LCD would effectively have just one pixel made up of thousands of unnecessarily redundant subpixels. Second, the claims require "removing said...row and column interconnections prior to completion of the display," and these subpixel interconnections are not removed. As shown in Fig. 4, these subpixel interconnections are inside the perimeter formed by

the row and column pads to which the driver circuitry is wirebonded, and accordingly these pads or anything inside the perimeter formed by the pads, are not removed from the panel.

The '002 specification describes "interconnecting substantially all of said row lines to one another and substantially all of said column lines to one another" elsewhere in the patent. It describes using a "shunt line 220 which is connected to one set of source or gate lines" and connecting "the other set of gate or source lines by a shunt line 224." 8:21-26; Fig. 7. The shunt lines are what interconnect the row and column lines into two sets, and the patent describes the removal of the shunt lines. *Id.* The Court should thus adopt the plain meaning of the claim language "to one another" over LGD's erroneous and misguided approach.<sup>2</sup>

**b. Resistance (Claim 1) (JCC Ex. B, p. 8)**

LGD argues that the Court's construction of this term in the previous litigation was ambiguous, even though the Court arrived at its construction after LGD made the same arguments there that it again makes here. LGD Br. at 10-11. In the prior litigation, after considering both sides' constructions, the Court crafted its own construction based on the '002 claims and specification. In the guise of "clarification," LGD is really trying to broaden the Court's prior construction beyond what the claims or specification reasonably support. The "resistance" of the '002 patent is never described as including circuit components like diodes and inductors, and the Court's construction properly excludes them, but LGD's new construction would expand the scope to include them. LGD's position here is no different than the one it took in the prior litigation, in essence that "[a]ll circuit components...have the characteristic of resistance." Ex. B-3 (Plaintiff's Memorandum in Support of Its Proposed Claim Constructors (dated March 8, 2006) at 13). This expansive view is unsupported and incorrect. As the Court already appropriately noted, the patent "explicitly stated that certain elements of the invention could vary from the specific description in that embodiment, but did not include the 'resistance'

---

<sup>2</sup> LGD's argues that CMO's proposed construction "leav[es] potential ambiguity." CMO's proposal, however, is to use the plain meaning and does not change the claim language. LGD is effectively admitting that the '002 claim language is indefinite.

among those elements." Ex. B-2 (Previous Claim Construction at 12 n.3). The Court, having already construed this claim term, should reject LGD's attempt to enlarge the scope of its claims in this second litigation over the '002 patent and should maintain its prior, correct construction.

## **2. U.S. Patent No. 4,624,737 (JCC Ex. A)**

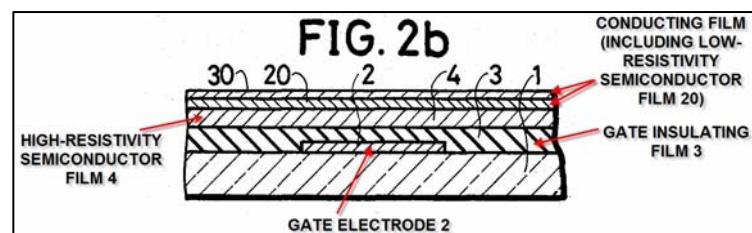
### **a. Gate insulating film (Claim 1) (JCC Ex. A, p. 6)**

While LGD does not specifically address the term "gate insulating film" in its opening brief, LGD argues that the "continuously depositing" step which introduces this term allows the gate insulating film to be deposited virtually anywhere above the gate electrode so long as the film is merely "supported by" the gate electrode—whatever that means. However, such a broad definition is not appropriate. The gate insulating film necessarily spans the region from the gate electrode to the high resistivity semiconductor layer above it. This location is mandated by the language of claim 1, and is also explicitly illustrated in '737 Fig. 2b. In addition, all of the insulating material from the gate electrode to the high-resistivity semiconductor film determines the specific electrical characteristics of the gate, and hence would be understood by those skilled in the art to be part of the gate insulating film. *See* Hatalis Decl., ¶¶ 20-24, 41-49; Ex. A-4, at 450-51, 473, 704. Thus, the gate insulating film must be in contact with the gate electrode.

### **b. Depositing on said gate electrode and substrate (Claim 1) (JCC Ex. A, p. 4)**

The "first step" of '737 claim 1 is "forming a gate electrode on an insulating substrate." The "second step" of claim 1—immediately following the first step—is "continuously **depositing on said gate electrode and substrate** a gate insulating film, a high-resistivity semiconductor film, and a conducting film...." 4:26-31

As explained in CMO's opening brief, these successive films are not simply deposited anywhere above



the gate electrode or substrate. Rather, they are deposited directly in contact with the gate electrode and substrate, as illustrated in Fig. 2b (text labels added) for example.

LGD argues that CMO's proposed construction ("depositing above and in contact with") is too narrow because it supposedly requires that all three deposited films directly contact the gate electrode and substrate. However, LGD misreads CMO's construction. Under CMO's construction, only the bottom film, *i.e.*, the gate insulating film, needs to be in contact with the gate electrode and substrate, because the three films are deposited successively starting with the gate insulating film. The high- and low-resistivity semiconductor films can be deposited atop the gate insulating film, but need not be in contact with the gate electrode or substrate.

CMO's proposed construction is not only reasonable, it precisely reflects what is shown by Fig. 2b of the '737 patent. In fact, LGD concedes in its brief (page 13) that "as shown in Fig. 2b and 3b of the specifications, the first gate insulating film would be the only film that is in contact with the gate electrode and the substrate." CMO agrees. Unlike LGD's proposed construction, which would allow the gate insulating film to be many layers above the gate electrode and substrate, CMO's construction is the only one that actually matches the express teachings of the '737 patent.

LGD also argues that since the term "contacting" is used elsewhere in claim 1, the term "on" must mean something broader. However, the term at issue is "depositing on," not merely "on." Moreover, it does not follow that "depositing on" is necessarily broader than "contacting." Unlike the second step of claim 1, the fourth step does not use the term "depositing on" and therefore the patentee decided that it was necessary to specify that the electrodes need to be "contacting" other TFT features. Read in the context of the whole claim, "depositing on" encompasses the fact that the bottom film is in contact with the gate electrode and substrate.

**c. Without exposure to an oxidizing atmosphere/Oxidizing atmosphere (Claim 1) (JCC Ex. A, pp. 10, 11)**

Claim 1 of the '737 patent requires that several specific films must be deposited successively "without exposure to an oxidizing atmosphere." The '737 specification explains that this means they are not "exposed to *the atmosphere*"—*i.e.*, to the uncontrolled ambient atmosphere—as the devices are moved between work stations. 1:32-40 (emphasis added), 2:33-

36; *see also* Hatalis Decl., ¶¶ 26, 55-59.

LGD's proposed construction, on the other hand, is vague and would lead to inconsistent results. Rather than focusing on the process itself, LGD's construction focuses on the result, *i.e.*, the amount of oxidation that actually occurs on a film, and whether it would be "detectable." Because LGD's construction does not specify the detection method, the scope of the claim would vary depending upon the detection technique as well as the detection threshold. Hatalis Decl., ¶ 62. LGD's amorphous construction would render claim 1 indefinite, similar to other cases involving ambiguous claim language. *See, e.g., Halliburton Energy Serv., Inc. v. M-I LLC*, 514 F.3d 1244 (2008) (finding term "fragile gel" indefinite where unclear what measurements qualified a gel as fragile); *Honeywell Int'l, Inc. v. Int'l Trade Comm'n*, 341 F.3d 1332, 1339-42 (Fed. Cir. 2003) (claims held indefinite where patent did not specify which one of four known methods for preparing polyester yarn in connection with melting point calculation was to be used); *Amgen v. Roussel*, 314 F.3d 1313, 1341 (Fed. Cir. 2003) (claims held indefinite where patent did not "direct those of ordinary skill in the art to a standard by which the appropriate comparison can be made" for determining infringement).<sup>3</sup> The court in *Halliburton* explained that when a "proposed construction requires that an artisan make a separate infringement determination for every set of circumstances in which the composition may be used, and when such determinations are likely to result in differing outcomes (sometimes infringing and sometimes not), that construction is likely to be indefinite." *Halliburton*, 514 F.3d at 1255. These same problems would be created by LGD's ambiguous construction.

While LGD argues, without support, that one skilled in the art would understand that "small or insignificant amounts of oxidizing agents" would not be an oxidizing atmosphere, it is unclear what is meant by a "small" or "insignificant" amount. LGD's also attempts to equate

---

<sup>3</sup> This case is different than *Invitrogen Corp. v. Clontech Labs., Inc.*, 429 F.3d 1052 (Fed. Cir. 2005). Although that case involved terms such as "no detectable RNase H activity" the court found that the patent in question "unmistakably teaches how one skilled in the art would determine that a mutant RT 'completely lacks' RNase H activity." *Id.* at 1076. Here, the '737 patent is silent about to determine a "detectable amount" of oxides.

"oxidizing atmosphere" with "an atmosphere that would not impair the electrical characteristics of a TFT" but this speaks to an entirely different standard, based on the electrical performance of the device and does not depend on whether or not oxides are "detectable." LGD's alternative phrasing of the standard is also vague, because it is unclear how much oxidation is necessary to "impair" the electrical characteristics of a device.

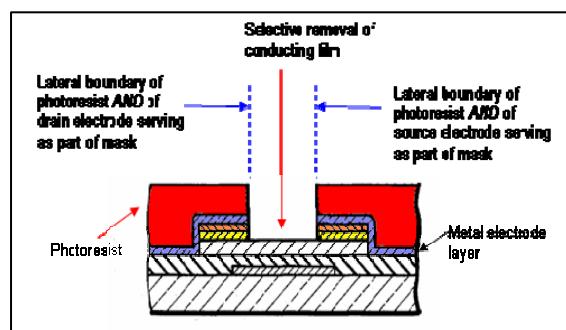
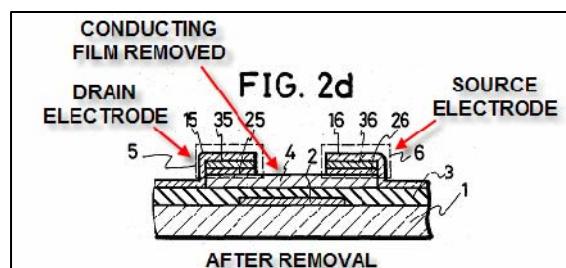
**d. Mask/source and drain electrodes serving as at least a part of the mask (Claim 1) (JCC Ex. A, pp. 19-21)**

LGD ignores the term "mask" and sidesteps what that term means to those of ordinary skill in the art. As a result, LGD's proposed construction is seriously flawed and incomplete.

As explained in CMO's opening brief, a mask is the top surface pattern that defines by its edges the boundaries of underlying material to be removed. See Ex. A-6 at 5, 7-10, 12, 17-19, 23-24. The mask contains the "pattern of windows" that are transferred to the surface of a device under fabrication, thus defining the shape of the patterned features on the device. *See id.* at 17.

LGD improperly attempts to conflate CMO's construction with a different construction offered by defendant CPT in the prior '737 litigation. CMO does not contend that the source and drain electrodes are the "outermost layer," only that in order to "serve as" part of a mask they must perform some role in defining the boundaries of underlying material. This is exactly what is shown in Fig. 2d of the '737 patent (text labels added), where the source and drain electrodes define the lateral extent of the exposed conducting film being removed.

LGD implies that the source and drain electrodes would be covered by a photoresist layer during etching, even though the '737 patent does not explain exactly how the electrodes serve as the mask in such a case. But even assuming



photoresist were placed on top of the electrodes, they would nonetheless have to share at least some of the same lateral contours in order to serve as "part of the mask" for removal of the underlying conducting film, as illustrated in the second modified version of '737 Fig. 2d above.

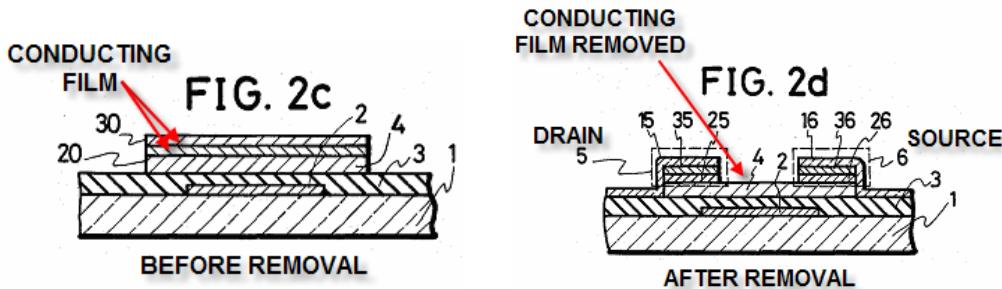
If all that were required is that the source and drain electrodes be somewhere beneath the photoresist, as LGD appears to suggest, then everything underlying the mask and above the affected surface would arguably be "part of" the mask, because by definition the mask is on the surface and is "supported" by everything beneath it. Such a broad construction is absurd and contrary to the teachings of the '737 patent, which plainly shows the removed portion of conducting film matching the precise lateral boundaries of the source and drain electrodes.

LGD wants an overbroad construction so that the '737 patent could read on products where the source and drain electrodes do not define any of the boundaries of material being removed, nor share any common lateral boundaries with the overlying photoresist. That is why LGD proposes a vague construction in which the electrodes are merely "part of a pattern" but actually do not have any role whatsoever as a mask as that term is used in the art.

e. **[A fifth step for] selectively removing said conducting film exposed on said island region [with said source and drain electrodes serving as at least a part of the mask] (Claim 1) (JCC Ex. A, p. 17)**

The fifth step of claim 1 calls for "selectively removing said conducting film exposed on said island region with said source and drain electrodes serving as at least a part of the mask." 4:40-42 This means that the conducting film exposed between the source and drain electrodes is eliminated (*i.e.*, removed), as explained in CMO's opening brief.

LGD argues that CMO's construction is "unsupported, unwarranted and contrary to the clear meaning of the claim language," but fails to recognize that CMO's construction is exactly what is shown by the '737 Figs. 2c-2d (annotated below), showing "before" and "after" views:



LGD also ignores that eliminating all of the conducting film is necessary to electrically isolate the source and drain electrodes (Hatalis Decl., ¶¶ 63-68), and that the '737 patent teaches over-etching beyond the conducting film (3:7-10) for this apparent purpose. *Id.*

LGD also argues that claim 1 should be interpreted more broadly than the '737 disclosure because claim 1 uses the term "selectively removing" and not "removing entirely." However, the patentee specifically chose the term "remove" which has the plain meaning of "eliminate." Ex. A-7, at 997. In addition, claim 1 clearly explains how the "selective removal" occurs—by "using said source and drain electrodes as at least part of the mask" to remove the "exposed conducting film" between them. The "selective" part of the film removal is in the *horizontal* direction, by virtue of the mask, not in the vertical direction.

The correctness of CMO's proposed construction is confirmed by technical references such as *Thin Film Processes*, which explains that selective removal of a film using a mask involves removing all of the film material in the exposed (unprotected) regions:

In many instances, etching processes are used to produce certain patterns in thin films. Selected portions of the film are masked by another thin film coating material which is unaffected by the etchant to be used for patterning. Etching is then carried out so as to remove all the film material in the unprotected regions. The protective coating film is then usually stripped, leaving the desired pattern in the underlying thin film. Ex. A-9, at 407 (emphasis added).

CMO's proposed construction thus accurately captures the teaching of the '737 patent, and is supported by the '737 text and figures, the dictionary definition of "remove," technical references, and expert opinion. It is LGD's proposed construction, not CMO's, that lacks support in the '737 patent or anywhere else for that matter. Nowhere does the '737 patent teach or even

suggest "partial removal" of the exposed conducting film as suggested by LGD.

### **3. U.S. Patent No. 5,825,449 (JCC Ex. C)**

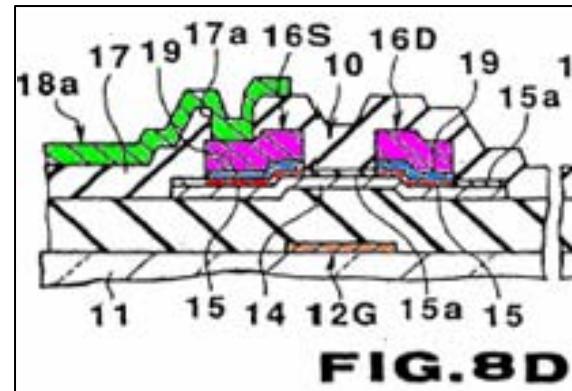
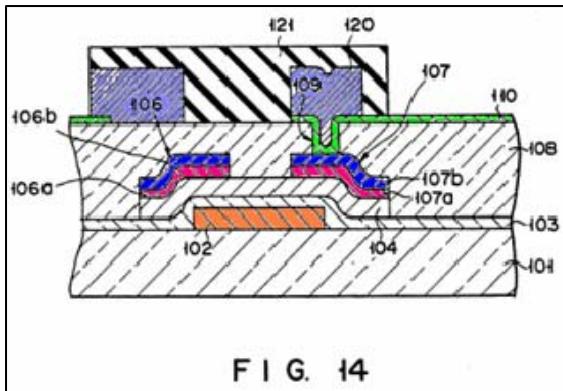
#### **a. Conductive layer (Claims 1, 10, 11) (JCC Ex. C, p. 2)**

LGD argues that CMO's construction of conductive layer "cannot be applied consistently throughout the claims," in essence admitting that its own proposal is inherently inconsistent. LGD recognizes that claim 10 clearly demonstrates that a "conductive layer" may include multiple patterned features, such as a gate pad and source pad, but then erroneously reasons that the same term in claim 1 cannot include multiple patterned features because those features are not explicitly listed in claim 1. The better conclusion is that claim 1 is broader than claim 10 because it does not limit the conductive layer to the specific patterned features of claim 10.

LGD next argues that claim 1 limits "conductive layer" because the layer is formed on "a first portion of the substrate" or "a first portion of said insulative layer." However, it is basic patent law, subject to very limited exceptions not applicable here, that "a" means "one or more" in an open-ended claim. *Baldwin Graphic Sys. Inc. v. Siebert, Inc.*, 512 F.3d 1338 (Fed. Cir. 2008). Thus, "a first portion" equates to "one or more portions" and is not limited to a single portion of the substrate or insulative layer.

LGD also argues, without any expert support, that if "conductive layer" refers to the entire conductive layer, as opposed to a single island, then the first and second conductive layers would both necessarily be connected to the terminals of a TFT, because TFT's are "generally made of two conductive layers." LGD's basic premise is flawed in multiple ways. First, it is incorrect from a technical standpoint because the patent describes a TFT with an ITO layer, which is a third conductive layer. Second, the '449 relates not only to making TFTs but also a wiring structure. While it may be true that sometimes only two conductive layers are used for both the wiring connections and TFT features, this is not always the case. There can be additional conductive layers used for wiring that are not used for TFT features, and vice versa. In fact, the applicant for the '449 patent was well aware that three or more conductive layers (in

addition to ITO) could be used to build a TFT and wiring structure, because he cited prior art to the PTO that showed such structures (Ex. C-12):



**U.S. Patent No. 5,327,001**

**European Patent No. 0 530 834**

For example, U.S. Patent 5,327,001 (Ex. C-9) discloses a device having at least four conductive layers: 102 (gate electrode), 106b & 107b (metal film), and 120 (contact metal), and ITO layer 110, for a total of four conductive layers. European Patent 0530834 (Ex. C-10) also discloses a device having at least four conductive layers: 12G (gate electrode), 16S & 16D (metal film), and 19 (contact layer made of metal such as Cr), and ITO layer 18a.

Thus, LGD claimed broadly, with the understanding that other TFT configurations with more than two layers were possible. The fact that "conductive layer" is a broad term does not mean that claim 1 will always be met by a TFT having two conductive layers plus ITO. An accused device must still meet the other requirements of claim 1, in particular the "contact hole" limitations elsewhere in the claim. LGD is simply trying to narrow claim 1 based on an assumption that all devices must look exactly like Figure 3. Such narrowing is inappropriate in view of the broad meaning ascribed to "conductive layer" by the '449 specification and claim 10.

Lastly, LGD cites to a portion of the '449 specification (4:61-64) referring to certain patterned features of ITO as "layers." That portion of the specification is consistent with CMO's proposed construction that a conductive layer "may include one or more patterned features." The '449 patent uses "conductive layer" broadly to include one or more patterned features formed at the same time. *E.g.*, 1:34-37; 1:56-60; 1:61-64; 2:37-46; 3:44-47; 4:65-5:22; 7:36-39. There is

no clear disclaimer of the broad scope of "conductive layer" as set forth in the specification and affirmed by the recitals of claim 10.

LGD does not appear to dispute the fact that the multiple patterned features of the conductive layer would all be formed of a single uniform material, as explained in the '449 patent itself. 3:44-47. Patterned features of a conductive layer must be made of the same material because these features all originate from the same "thickness" of electrically conductive material, and are "simultaneously patterned" or "formed at the same time." 1:61-64, 4:50-53; Hatalis Decl., ¶¶ 80-81. Even LGD's own expert Dr. Rubloff admits that the different structures of the conductive layer qualify as such because "they are all made from the metal that was deposited at the same time in one step." Ex. C-11 [Rubloff Depo.] at pp. 16:4-17:2. The construction of "conductive layer" should reflect these undisputed facts.

**b. One (Claim 1) (JCC Ex. C, p. 8)**

LGD argues for a construction of the term "one" apart from the "wherein" clause in which it appears. This term should be construed as part of the larger "wherein" clause that provides necessary context.

Nonetheless, LGD makes certain flawed arguments that potentially carry over to the discussion of the larger clause. LGD first argues that "one" should be limited to the singular because it has an ordinary meaning of a "single unit." However, the question is not whether "one" means a single unit, but whether the fact that one conductive layer is connected to one of the three terminals of a TFT necessarily precludes the other conductive layer in claim 1 from also being connected to a terminal of the TFT. The answer to this question is a resounding no. Figures 4 and 5 of the '449 patent illustrate an embodiment in which both first and second conductive layers are connected to terminals (gate and source) of a TFT.<sup>4</sup> Nothing in the '449 specification or claim 1 limits the connectivity of the other conductive layer.

---

<sup>4</sup> Figures 4 and 5 illustrate both conductive layers connected to terminals of a TFT under any party's construction of "conductive layer." Figure 3 also illustrates both conductive layers connected to terminals of a TFT under CMO's broader construction of "conductive layer."

LGD then cites *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261, 1271 (Fed. Cir. 1986) for the proposition that "[w]hen...a numerical limitation on the structural elements is clear from the language of the claim, the claim is so limited and cannot include more." However, *Moleculon* does not establish a hard and fast rule that numeric claim limitations are always strictly limited, but rather adopted a flexible approach that "depends on the language of the claim, the specification, prosecution history, and other claims." 164 F.3d at 1271. There, the court ultimately found that the term "engaging eight cube pieces as a composite cube" was limited to only eight cube pieces because of subsequent claim steps that were "limited to manipulating sets of four cubes only." *Id.*, at 1272. By contrast, here no limitations of '449 claim 1 exist that would preclude both conductive layers from being connected to terminals of a TFT, and in fact that '449 specification and prosecution history demonstrate that both conductive layers can be connected to terminals of a TFT.

Indeed, other cases closer to the instant facts have found that specific numeric claim elements are not necessarily limited. *See, e.g., Lampi Corp. v. Am. Power Prods., Inc.*, 228 F.3d 1365, 1375 (Fed. Cir. 2000) (claim covering a nightlight with housing having "two half-shells" could cover infringing product with five parts as housing); *Kothmann & Kothmann, Inc. v. Trinity Indus., Inc.*, 287 F. Supp. 2d 673, 693 (S.D. Tex. 2003) (construing the limitation "said energy-absorption terminal including *one of* the cutting section and cutable member" as permitting the energy-absorption terminal to include *either or both* the cutting section and the cutable member (emphasis added)); *TM Patents, L.P. v. Int'l Bus. Machs.*, 72 F. Supp. 2d 370, 395-96 (S.D.N.Y. 1999) (interpreting "one" to mean "at least one" because doing otherwise would exclude a preferred embodiment, in spite of prosecution history); *Application of Teague*, 254 F.2d 145, 150-51 (Bd. Cust. & Pat. App. 1958) ("Claim 8 does not say 'only one' and so it must be construed as meaning 'at least one.'").

**c. [Wherein] one of said first and second conductive layers is connected to one of a plurality of terminals of a thin film transistor (Claim 1) (JCC Ex. C, p. 7)**

As it did in the prior litigation, LGD ignores the relevant parts of the '449 file history

clearly demonstrating that the "wherein" clause contemplates either or both the first and second conductive layers being connected to the terminals of a TFT. As explained in CMO's opening brief, the "wherein" clause was added during prosecution with the explanation that it was intended "essentially to include the recitations of canceled claim 12" (Ex. C-3, at 5), which in turn clearly provided that ***both*** the first and second conductive layers could be connected to terminals (gate, source or drain) of a TFT:

12. A liquid crystal display device in accordance with claim 11, wherein said ***first conductive layer is a gate electrode*** and said ***second conductive layer is a source electrode***. Ex. C-4, at 16-17 (emphasis added).

Avoiding the public record, LGD instead makes unfounded arguments in an attempt to improperly limit the scope of claim 1 and the "wherein" clause. LGD argues that if "one" meant "one or more" then the claim would "allow for both the first and second conductive layers to be connected to each and every terminal" of a TFT, thus "resulting in an unusable device." However, an attempt to limit a claim based on alleged inoperability only can prevail if all embodiments falling under the proposed construction are inoperable, not merely some of them.<sup>5</sup> *Cordis Corp. v. Medtronic Ave, Inc.*, 511 F.3d 1157, 1174 (Fed. Cir. 2008). LGD only points to one possible embodiment out of many that are possible, and of course makes no argument that the embodiments of Figs. 4 and 5 showing both conductive layers connected to terminals of a TFT are inoperable, and they are not.

LGD next attempts to argue that the embodiment of Fig. 5 is irrelevant because of a supposed "clear disavowal" of claim scope during prosecution. While it is true that claim 1 was amended to overcome U.S. Patent 5,162,933 to Kakuda, the applicant never disclaimed having both conductive layers connected to terminals of a TFT. Rather, the '449 applicant argued that neither of Kakuda's conductive layers are connected to terminals of a TFT:

...Kakuda et al. fails to disclose or suggest connection lands 29L or 32L being

---

<sup>5</sup> In addition, LGD's argument that a hypothetical device would be inoperable is incorrect because it is based on LGD's erroneous construction of "conductive layer." Applying CMO's proper construction of "conductive layer," the different "islands" of the conductive layer could be connected to different terminals of a TFT, and the device would be fully operable.

connected to a terminal of a thin film transistor. Thus, claim 11 is patentably distinguishable from Kakuda et al. Ex. C-3, at 6 (emphasis added).

Therefore, LGD's argument about a "clear disavowal" of claim scope is incorrect, and in direct conflict with the clear written statement in the prosecution history that the "wherein" clause includes the recitations of claim 12, having two conductive layers connected to TFT terminals. The fact that LGD was able to mislead the previous district court on this point does not mean that it should be successful here in doing so.

**d. Gate pad/Source pad (Claims 10, 11) (JCC Ex. C, pp. 12, 13)**

LGD ignores the core issue for the terms "gate pad" and "source pad." Rather than addressing the language "from a gate driving circuit" and "from a data driving circuit" that it now seeks to drop from the very construction that it championed in the prior litigation, LGD only addresses the "gate signal" and "data signal" language on which all parties agree. Apparently LGD hopes that the Court will overlook the glaring change in its position. As noted in CMO's opening brief, judicial estoppel and issue preclusion prevent this flip-flopping.

LGD's opening brief fails to explain why it has suddenly reversed positions on its own prior constructions and attempted to eliminate the language identifying the sources of the gate and data signals. Claims 10 and 11 relate a "liquid crystal display device" and method for making such a device. There can be no dispute that in an LCD display device, the data signal is received "from a data driving circuit" and the gate signal is received "from a gate driving circuit." *See* 1:24-30, 1:52-55. These are fundamental attributes of an LCD device. LGD's attempt to omit these aspects will inject ambiguity into the relationship of the circuitry to the signals in the claimed LCD display device.

**e. Formed on/Formed on...[substrate/layer]/On said [surface/film/layer] (Claims 1, 10, 11) (JCC Ex. C, pp. 2, 3, 4, 5, 14, 15, 17)**

Eight disputed terms for the '449 patent involve the phrase "formed on" or "on" in connection with a relationship between a top film/layer to an underlying structure (such as a particular substrate, film or layer). All parties appear to agree that the terms "on" and "formed on" in the context of the '449 patent generally mean "above and in contact with." AUO further

contends, among other things, that these terms require that the upper film/layer be "supported by" the underlying structure. Such an addition does not appear necessary. Given the fact that the agreed-upon part of the construction for these terms already calls for the top film/layer to be "above and in contact with" the underlying structure, the additional "supported by" language adds a new structural requirement which is not found in the '449 specification.

**4. U.S. Patent Nos. 5,905,274 (JCC Ex. F); 6,815,321 (JCC Ex. G); 7,176,489 (JCC Ex. H)**

- a. **The first metal layer being wider than the second metal layer by about 1 to 4 µm ('274 patent, Claims 1, 4) (JCC Ex. F, p. 8)/The first metal layer being etched to have a width greater than a width of the second metal layer by about 1 to 4 µm ('321 Patent, Claim 16) (JCC Ex. G, p. 13)/A total width of the first metal layer being greater than a total width of the second metal layer by about 1 to 4 µm ('321 patent, Claim 7; '489 patent, Claim 1) (JCC Ex. G, p. 6; Ex. H, p. 5)**

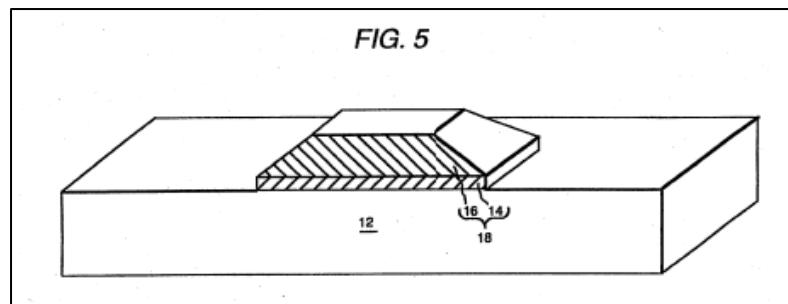
Where to measure the first and second metal layers to determine whether the first layer is wider than the second layer by about 1 to 4 µm is a key, specific aspect of this limitation. LGD's construction and arguments provide no clarity. LGD's construction defines the width of the first metal layer as having two components, a portion "in contact with the second metal layer" and portions "exposed to a subsequently deposited insulating layer." LGD Br. at 21-22. In Fig. 3 of the '274 patent, the insulating layer 51 is in contact with not only portions of the top surface of the first metal layer 43 but also the tapered side surfaces. LGD's construction is thus ambiguous, as it is open to at least three possible width measurements for the first metal layer: the first possible width measurement being along the entire top horizontal surface of the first metal layer, the second possible width measurement being along the entire top horizontal surface plus the length of the tapered surfaces, and the third possibility being along the bottom surface of the first metal layer. Additionally, LGD's construction and brief are completely silent on where to measure the width of the second metal layer, injecting further ambiguity.

To support its construction, LGD argues that the claims require the prevention of hillock at the sides of the metal layer and that one skilled in the art would understand the limitation to include the entire portions where hillock can occur, *i.e.* where the first metal layer is exposed to

the insulating layer. LGD Br. at 22. This argument is flawed in multiple ways. First, the claims of the '321 and '489 patents do not require the prevention of hillock, and LGD has still proposed the same construction for these patents. Second, LGD does not provide any supporting extrinsic evidence of what one skilled in the art would understand this term to mean. Finally, the intrinsic evidence cited by LGD, 5:22-23 & 6:40-42, actually supports CMO's construction. The text immediately following the cited passages state that the difference in widths creates a double step. *See* 5:25-30; 6:42-45. The second step is formed by the top surface of the first metal layer, not the tapered side surfaces.<sup>6</sup> This text thus supports measuring relative widths of the top surfaces.

LGD argues further that the width of the first metal layer is the same as the width of the photoresist, and cites a prior art reference as supposed proof that the first metal layer cannot be wider than the photoresist. LGD Br. at 22. The cited '986 patent is not helpful and, if anything, introduces more ambiguity. This reference illustrates how the photoresist becomes smaller during etching of the second metal layer. *See* Ex. FGH-2 ('986 Patent, Figs. 2-4; 6:3-13). The width of the photoresist after etching coincides with the top surface of the second metal layer, while the bottom surface of the second layer coincides with the photoresist width before etching. However, the passages from the '274 patent quoted by LGD in its brief do not specify whether the photoresist width W1 is before or after etching of the first metal layer. Because '274 Figure 4C shows the width W1 relative to the top surface of the first metal layer, the '274 specification is apparently referring to a photoresist width after etching. Thus the '986 patent sheds no light on where to measure width W1 in the '274 patent.

LGD also cites the file history from a related application which characterized a Wei reference as having first and second metal layers with the same




---

<sup>6</sup> The first step is from the top surface of the first metal layer to the substrate. The second step is from the top surface of the second metal layer to the top surface of the first metal layer.

width. LGD Br. at 22. Reproduced here is Fig. 5 of Wei. The surfaces 14 and 16 that have the same width in Wei include the top surface of the first metal layer, not the side "portion" of the first layer that is exposed to the subsequently deposited gate insulating layer, as would be required by LGD's proposed construction. This prosecution history supports CMO's construction that the width of the first metal layer should be measured along the top surface of the layer. In any event, an ambiguous comment about a prior art reference from a different patent application cannot serve to broaden the original disclosure of the '274 patent, which clearly shows the top widths of the two metal layers as the ones being compared.

Even less relevant is LGD's citation to arguments made during prosecution of the '274 patent regarding the Miyago reference, from which LGD concludes that the claims are limited to a gate with a subsequently deposited insulating layer, not a three-layered clad structure.<sup>7</sup> LGD Br. at 22. This argument does not assist in defining the width measurement for the first metal layer. Whether or not the claims provide for a third metal layer does not answer the question of whether the first metal layer width should be measured from the top or bottom surface of the first metal layer.

The intrinsic evidence for CMO's construction is unequivocal and clear, the width measurements are to be taken along the top surfaces of each metal layer: "[T]he understanding that this measurement relates to the widths of the tops of each of the two layers may be further clarified, if necessary, by referring to the diagrams, specifically Figure 4C." Ex. FGH-1 (United Kingdom Application, 9804417.5, Response, March 4, 1999 at 3); *see also* Fig. 4C. The construction should also include the double step that results from having the second layer shorter than the first layer. LGD argues that the step structure requirement disregards the technical disclosures in the specification regarding etching. LGD Br. at 22-23. But LGD's brief provides

---

<sup>7</sup> LGD's argument here contradicts its position on the term "double-layered." If the claims do not cover a gate with the three-layered clad structure of Miyago, then the claims should be limited to a gate with only two layers.

no citations or further elaboration about what is meant by this statement. The Court should thus reject LGD's unsupported argument and adopt CMO's construction.

**b. Double-layer structure ('274 patent, Claims 1, 4) (JCC Ex. F, p. 3)/Double-layered metal gate ('321 patent, Claim 7; '489 patent, Claim 1) (JCC Ex. G, p. 4; Ex. H, p. 3)**

LGD argues that the double-layered gate structure recited in the '274 patent can include more than two layers because the claims recite the term "including." LGD Br. at 23. LGD further proposes that the double-layered gate terms recited in the '321 and '489 patents may also have more than two layers. *Id.* at 24-26. Yet, the claims of the '321 and '489 patents lack the same "including" language. At a minimum this difference in language shows an intent to not provide the same construction for the '321 and '489 claims. Additionally, the intrinsic evidence shows that the claim language in the '274 patent is not open ended regarding the number of gate layers but is another way of describing a double-layered metal gate. "The present invention relates to...a thin-film transistor having a gate including a double-layered structure and a method of making such a double-layered metal gate." 1:6-10.

LGD also points to the file history to support its construction that a double-layered gate may have more than two layers. LGD Br. at 23. First, LGD mischaracterizes the Patent Office's discussion of Miyago as stating that it is a double-layered gate structure. *Id.* Miyago discloses a three-layered structure that includes a layer of aluminum ("Al"), a layer of molybdenum ("Mo") and a layer of tantalum ("Ta"). 3:61-4:9. The Patent Office only referred to the aluminum and molybdenum layers when comparing the reference to the double-layered structure recited in the claims. "Miyago teaches the gate including a first layer formed of Al and a second layer formed of Mo." Excerpts of Joint Ex. F-1 (8/20/1998, Office Action at 3). The PTO did not characterize Miyago as a double-layered structure.

Next, LGD points to statements made by the patentee to the PTO about the gate structure of Miyago being a double-layered structure. LGD Br. at 23. Miyago clearly discloses three layers, not two. Additionally, the patentee characterized Miyago as an Al-Mo double-layer structure with an additional layer of tantalum. "More specifically, Miyago teaches that in order

to solve the top-surface hillock problem, a first tantalum layer is put on the Al-Mo double layer structure then a TaO<sub>x</sub> layer is put on the Ta layer." Excerpts of Joint Ex. F-1 (11/23/1998 Amendment at 4). The double-layered structure referred to in this statement has only two layers, aluminum and molybdenum. The patentee stated that "Miyago does use an aluminum layer in a double-layered gate..." but this is merely noting that the double-layered sub-structure of Miyago includes a layer of aluminum. *Id.*, at 3.

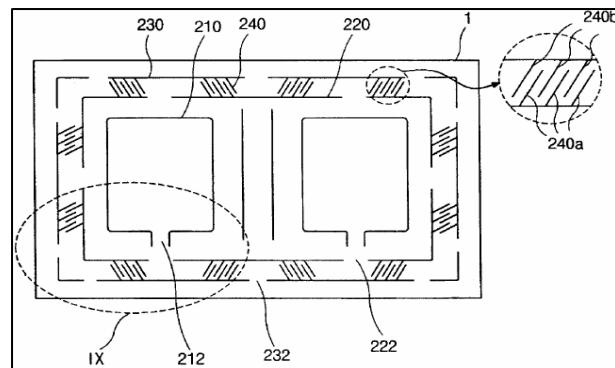
LGD's attempt to construe a double-layered structure/metal gate to include three or more layers should be rejected in view of the intrinsic evidence cited in CMO's opening brief.

## **5. U.S. Patent No. 7,218,374 (JCC Exhibit I)**

### **a. Wherein the auxiliary sealant and the main sealant are contiguous (Claims 1, 21) (JCC Ex. I, pp. 5-6)**

LGD's construction for "contiguous," which is "deposited in a continuous process," focuses on the manner in which the sealants are applied instead of the relative positions of the sealants on the substrate. In construing the claim element this way, LGD disregards the very reason why this element was added to claims 1 and 21 during prosecution of the '374 patent — to clarify that the main and auxiliary sealants must be in physical contact with one another, or touching. Prior to amendment, the PTO rejected claims 1 and 21 in view of two references, one of which was U.S. Patent No. 6,573,968 (the "Jeong patent") (Ex. I-2). The examiner stated:

[A]s figure 8 [of Jeong, reproduced here to the right] discloses there is connection between [third] auxiliary seal lines (240a, 240b). The third auxiliary seal lines pass only gas such as air...It would have been obvious...to further incorporate the step of forming a plurality of auxiliary seals (210-240)...connecting to the main sealant (through an opening 212), as taught by Jeong. Ex. I-4 at 3-4.



Thus, the examiner noted that there is some sort of connection between auxiliary seal lines 240a and 240b. However, the connection to which the examiner referred is not a physical connection that requires the sealants to touch, given that auxiliary seal lines 240a and 240b let air pass

between them and, as one can observe from the figure, are not actually touching one another. The examiner then explained that it would be an obvious additional step for these auxiliary seal lines to "connect[] to the main sealant (*through an opening 212*)," thereby rendering the '374 claims invalid for obviousness. Once again, this connection suggested by Jeong, which would occur "through an opening," does not require actual touching between the sealants.

The applicant then amended the claims to include the "contiguous" claim element, which made clear that, in contrast to Jeong, the claimed "invention" of the '374 patent requires the auxiliary and main sealants to physically touch one another. Ex. I-5. Only after this amendment did the examiner allow claims 1 and 21 to issue. Notably absent from this discussion in the prosecution history is any mention of the manner in which the sealant is applied, much less any mention of "depositing [sealant] in a continuous process." LGD's construction is thus wholly divorced from the purpose of this claim element.

Moreover, LGD's attacks on CMO's construction are misguided and misleading. Not only does CMO's construction for "contiguous"—"touches but does not overlap"—remain true to the plain meaning of the term, but it is also consistent with the teachings of the specification. *See* CMO's Opening Brief at 35. LGD argues that Fig. 2B of the '374 patent "shows the end of the sealing pattern overlapping the beginning of the pattern." LGD Br. at 31. However, LGD fails to mention that Fig. 2B depicts a problem in the "Related Art" – that the overlap spreads into the active region of the display and contaminates the liquid crystal – a problem that the inventors of the '374 patent were attempting to correct. In contrast, every figure depicting the actual "invention" of the '374 patent shows the sealants touching at a point with no overlap, consistent with CMO's construction and the plain meaning of the term "contiguous." *See, e.g.*, Figs 3B-6; 3:65-4:10.

**b. Preparing a lower and an upper substrate (Claim 1) (JCC Ex. I, p 1)**

As a preliminary matter, this claim element does not particularly point out and distinctly claim the subject matter which the applicants regards as their invention and is therefore indefinite

under 35 U.S.C. § 112, ¶ 2.<sup>8</sup> However, if the Court determines that this claim element is not indefinite due to its insoluble ambiguity, the Court should nonetheless reject LGD's construction and give this claim element its plain and ordinary meaning. LGD's construction, "making the substrates ready for depositing sealant and liquid crystal material prior to attachment," improperly attempts to import a "depositing" limitation, just as LGD attempts to do with its construction of "applying a liquid crystal on one of the lower and upper substrates." *See* CMO's Opening Brief at 35. LGD's constructions for these claim elements violate the doctrine of claim differentiation. Claim 18, which depends from claim 1, adds only the limitation: "wherein the applying the liquid crystal includes dropping the liquid crystal onto the one of the upper and lower substrates." Thus, the narrower requirement of "depositing" or "dropping" as the means of application is a limitation of dependent claim 18 and should not be imported into claim 1.

## **6. U.S. Patent No. 6,803,984 (JCC Ex. E)**

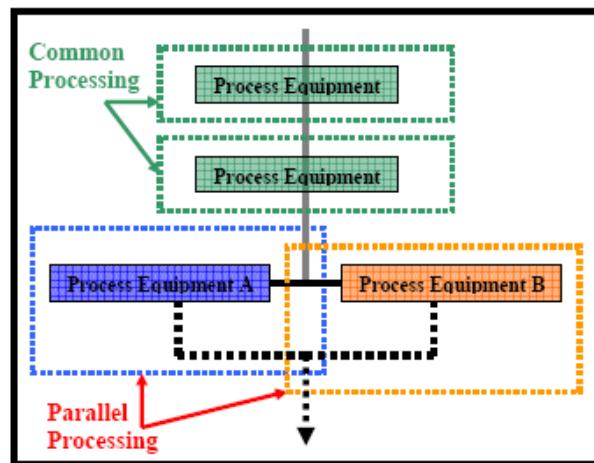
### **a. On a single production process line (Claims 1-3) (JCC Ex. E, p. 2)**

LGD argues that the above term requires only "an area or 'common path' where the substrates travel and are provided to each portion of the process and its corresponding equipment." LGD Br. at 34. LGD's proposed construction is vague and overly broad. For example, LGD's construction does not require the "area" or "common path" to extend between each piece of equipment, only between amorphous "portions of the process." According to LGD, these portions of the process line need not even be sequential. Nor does LGD's construction require the common path to extend through each "portion of the process" or its corresponding equipment.

---

<sup>8</sup> For example, the specification provides, "As shown in Fig 3A, a lower substrate 10 and an upper substrate 30 are prepared for the process." 4:30-31. But Fig 3A does not show how the substrates are prepared; instead, it merely depicts the substrates as rectangular blocks with no further detail or explanation, leaving the public to guess what is meant by the "preparing" claim requirement.

LGD's overbroad construction can be illustrated as shown in the adjacent diagram. The substrates travel along a "common path" (in grey) between "portions of the process" (dotted boxes). This broad construction encompasses prior art that LGD differentiated during prosecution: JP 08-171076 ("JP076"). *See Ex. E-2.* LGD conceded that "JP076 teaches that parallel processing is carried out on each...substrate with separate lines when distinct process are desired...common processing is carried out...when the same processes are desired." *Id.* As shown in the figure (simplifying Fig. 3 of JP076), LGD's construction improperly encompasses such parallel processing portions (the blue and orange dotted boxes).



LGD also cites to a definition of "production process line" as "an arrangement of operations in manufacturing permitting sequential occurrence on various stages of production." LGD Br. at 34. Yet, LGD's proposed construction allows parallel processing and thus ignores the requirement of "sequential occurrence" of operations from its own cited definition. Instead, the definition supports CMO's construction, which should be adopted.

**b. Passing the first and second substrates through [a sealing material coating/a liquid crystal dispensing] portion of the single production process line in serial order (Claim 1) (JCC Ex. E, p. 2)**

Passing...through...: LGD argues that "passing...through..." should be construed as "passing...along..." but provides no explanation as to why "through" should be changed to the broader and less specific term "along."<sup>9</sup> (LGD Brief at 34.) CMO's construction properly defines "through."

---

<sup>9</sup> LGD's construction is "passing the first and second substrates, one after the other, along a portion of the single production process line where the sealing material is selectively applied." JCC Ex. E, pp. 4-6.

In serial order: The Parties agree that the term "in serial order" means "one after the other," but LGD will not agree that the term also means "without anything in between." (LGD Brief at 36.) LGD ignores the specification: "[t]he TFT substrate and color filter substrates are alternately provided into a production line..." (5:23-25) and the fact that the TFT and CF substrates are processed as "a pair" (7:26-34). A "pair" cannot be processed "in serial order" on a single process production line if there are intervening components between them.

Sealing material coating portion: LGD argues that "sealing material coating portion" and "liquid crystal dispensing portion" are not limited to the sealant dispenser and liquid crystal dispenser, but can include any number of other pieces of equipment, including specifically LGD's proposed "common path." LGD Br. at 35. First, LGD identifies no outer boundary to the "portions" under its construction—such "portions" could include all of the equipment on the entire process line. Second, allowing inclusion of the "common path" in the defined "portions" encompasses the prior art, as illustrated in the above figure (blue box equating to the sealing portion the orange box equating to the LC dispensing portion). Finally, LGD's construction does not define what equipment must be passed through in the defined portions—*i.e.* under LGD's construction, the substrates can pass along the common path totally bypassing the sealant dispenser and liquid crystal dispenser, but still have satisfied the claim limitation. This directly contradicts the specification: "[e]ach pair of substrates will pass through each component of the production process line." 7:25-33 (emphasis added). Moreover, LGD admits that "portion" is synonymous with "step:" "the sealing material coating 'portion' of the process is the step that includes processing equipment." LGD Br. at 35 (emphasis added). It makes no sense that a substrate can bypass the sealant dispenser entirely, yet still have passed "through" the "sealing material coating" step. Accordingly, LGD's construction should be rejected, and the Court should adopt CMO's construction.

## B. CONSTRUCTIONS FOR DISPUTED TERMS IN CMO'S PATENTS

### 1. U.S. Patent No. 6,734,926 (JCC Ex. V)

#### a. Circuit board installation (Claims 1, 8, 15, 22, 29, 36) (JCC Ex. V, pp. 2-5)

LGD argues that in addition to the limitations actually in the claim, the Court should import into the claim a negative limitation that "no control circuit board can be located on the back of the backlight unit." LGD Br. at 67. Additions of claim limitations are improper. *See, e.g., JVW Enters., Inc. v. Interact Accessories, Inc.*, 424 F.3d 1324, 1335 (Fed. Cir. 2005) (stating that courts cannot "import limitations into the claims from examples or embodiments appearing only in the patent's written description, even when a specification describes very specific embodiments of the invention or even describes only a single embodiment."). LGD asserts that if a controller is put on the rear of the backlight unit "the primary objective of the invention...would be lost. The thickness of the apparatus would not be reduced...." LGD Br. at 68. But many LCD panels have multiple controllers. Moving one or more of such controllers from the rear of the backlight unit, or even some of the functionality of a large controller, to a location on the side of the LCD panel has the potential for slimming the panel—*i.e.* a panel with one large controller mounted on the rear of the backlight unit would have a larger width than a similar panel with two smaller controllers, one mounted on the rear of the backlight unit and the other on the side of the LCD panel.

LGD also argues that the term "installed on" should be construed as "mounted on." While the preferred embodiments in the '926 patent may describe installing the circuit board directly on the side portions of different structures, there is no requirement in the specification that there be no intermediate materials or structures between the circuit board and the side portion. Thus, CMO's construction that the circuit board is "mechanically supported by" the side portion of the claimed structure is appropriate.

**2. U.S. Patent No. 6,134,092 (JCC Ex. U)**

**a. A series of point light sources (Claim 1) (JCC Ex. U, p. 1)**

LGD argues that this term requires an LED package structure and not just a semiconductor LED die. LGD Br. at 70. LGD's proposed construction "a series of separate components" does not break the word component down into packages and dies. Consequently, LGD now appears to be construing its own construction. Its attempt to import yet another claim limitation is done with a single piece of circumstantial intrinsic evidence. LGD also points to other unrelated patents and argues that because those patents disclose LED packages, the claims of the '092 must be narrowed to require packages. *Id.* at 71. LGD's arguments are completely without merit.

LGD argues the claims require that the point light sources emit light into a waveguide or optical cavity. LGD Br. at 70. This is only partially true. Claims 12 and 21 have no such requirement. LGD also contends that the desired light for LCD displays is typically white and that white LEDs require a yellow phosphor which is part of the package. *Id.* at 70-71. First, LGD provides no evidence, intrinsic or extrinsic, to support any of the statements provided in this portion of their brief. There is no evidence in the record that the desired light must be white, or that white LEDs require a yellow phosphor. For example, LGD itself notes that white light can be created by red, blue and green LEDs. *Id.* These LEDs would not need a yellow phosphor.

Next, LGD states that the drawings show the point light sources as packaged LED components. *Id.* The drawings do not show LED packages, but merely circular and semi-hemispherical shapes. *See* Figures 2, 11, 13 and 13A. The '092 patent drawings do not depict LED packages, or dies separate from packages.

LGD points to a number of references that disclose LED packages, including prior art cited during the prosecution of the '092 patent. LGD Br. at 70-71. To the extent LGD is attempting to prove that LEDs always have a package, a handful of patents that have an LED package do not establish this position. Additionally there are backlight patents that use LED dies

without packages. For example, U.S. Pat. No. 6,043,591 discusses the use of LEDs without a package. *See Ex. U-2 ('591 patent, Figs. 12 and 13; 8:5-14); see also Ex. U-3 (U.S. Pat. Nos. 5,936,353; Ex. U-4 (U.S. Pat. No. 5,278,432).*

Finally, LGD cites U.S. Patent No. 6,473,554 to show the inventors' understanding of what is an LED point light source. "The subjective intent of the inventor when he used a particular term is of little or no probative weight in determining the scope of a claim (except as documented in the prosecution history)." *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 985 (Fed. Cir. 1995). In any event, unlike the '092 patent, the drawings in the '554 patent show separate package and die components.<sup>10</sup>

LGD's attempt to narrow the claims to require LED packages should be rejected, particularly since the '092 patent and prosecution history never even mention packages.

**b. Diffusive reflective surfaces/Diffusive reflective optical cavities (Claims 1, 12, 17, 21) (JCC Ex. U, p. 2 & 6 )**

LGD attempts once again to import a claim limitation, "non-transparent" that is not found anywhere in the record.<sup>11</sup> LGD Br. at 72. The words "diffusive" and "reflective" need no construction. Both terms are well known to those skilled in the art. Yeh Decl ¶ 4. LGD states that the surfaces must be non-transparent so that they can reflect light. LGD Br. at 72. This is not true because there are reflective surfaces that are not totally non-transparent. Yeh Decl. ¶ 5. LGD's attempt to import non-transparent into the terms "diffusive reflective surfaces/optical cavities" should be rejected, especially in view of the record's silence as to the transparency of the surfaces/optical cavities.

---

<sup>10</sup> In a CIP of the '554 patent, U.S. Pat. No. 6,582,103, the inventors show a die separate from a package and refer to the die as a point source. Ex. U-5 ('103 patent, 3:46-57; fig. 3).

<sup>11</sup> LGD's single intrinsic citation, 1:44-52, says nothing about the transparency of the diffusive reflective surfaces.

**c. The diffusive reflective surfaces oriented relative to the series of point light sources and the waveguide so as to introduce light in regions of said waveguide between pairs of said point light sources (Claim 1) (JCC Ex. U, p. 3)**

LGD's construction fails to take into account the purpose of the diffusive reflective surface orientation. The surfaces are oriented to introduce light into regions of the waveguide between pairs of light sources. LGD's proposed construction does not define the orientation of the surfaces with enough detail to accomplish the stated objective within the claim. For example, a surface may be perpendicular to the waveguide and in front of the light source, such that the surface actually blocks, not introduces light. Such a structure would meet the construction proposed by LGD but not accomplish the purpose of the surface orientation. LGD's incomplete construction should be rejected.

**d. Guide members positioned along a periphery of the optical cavity (Claim 21) (JCC Ex. U, p. 6)**

LGD argues that the guide members should be construed to be unattached because the claim recites a space between the guide members. If "space" means unattached, then LGD's construction improperly renders the term space, recited later in the claim, superfluous. *Elekta Instrument S.A. v. O.U.R. Sci. Int'l, Inc.*, 214 F.3d 1302, 1307 (Fed. Cir. 2000) (terms should not be construed to make another claim term superfluous). Moreover, the term "unattached" is ambiguous—clearly everything in an LCD panel is directly or indirectly attached to each other.

**3. U.S. Patent No. 6,013,923 (JCC Ex. T)**

**a. During formation of said gate lines/during formation of said source lines (Claim 1) (JCC Ex. T, pp. 2-3)**

In arguing that this limitation should be limited to the time during which the gate lines are "deposited and etched," LGD argues for a construction that adds a temporal limitation not required by the claims and, indeed, directly contrary to the '923 preferred embodiments. LGD Br. at 74-75. The claims should be interpreted in the context of the specification. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (en banc) (stating that the specification "is the single best guide to the meaning of a disputed term" and usually "is dispositive"). The '923

specification describes preferred embodiments in which the connections between the gate lines and the shorting element are formed after the gates lines are deposited and etched, after the gate insulating layer is deposited, and after the semiconductor layer is deposited and etched. For example, in the embodiment shown in Fig. 4, the gate line 24 and shorting element 52 appear on the same level and may be deposited and etched at the same time. Fig. 4, 5:65-6:13. After the gate lines are deposited and etched, the gate insulating layer is added, followed by the channel (a part of the resistive protective element) 78 and then shorting element 56. The gate line is connected to the shorting element via the protective element 78 only at this point in this embodiment. The language for the entire claim phrase—"during formation of said gate lines, connecting one end of each gate line directly to a shorting element and another end of each gate line to a shorting element via a protection element"—is consistent with the specification, and LGD's argument is contrary to both.

Furthermore, the specification describes that one of skill in the art would understand the claim phrase should not be artificially limited in the way LGD wants. "As one of skill in the art will appreciate, the shorting ring 52 ***is formed*** when the gate lines 24 ***are being formed*** on the substrate of the TFT switch array structure. The shorting ring 56 ***is formed*** when the source lines 26 ***are being formed*** on the substrate." 6:14-18 (emphasis added). The verb tense indicates that the time for gate line formation is broader than the time for shorting ring formation—the shorting ring is formed when the gate lines are still in the process of being formed. *Id.* The claim phrase "during formation of said gate lines" should be understood in this context, as one of skill in the art would, and should encompass the formation stages from the deposition of the gate line to the connection of the gate line to the shorting element through the protective element.

In addition, LGD's artificially narrow temporal limitation cannot be correct because it would exclude the preferred embodiment described above. Claim constructions that exclude the preferred embodiment are rarely if ever correct. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996) (stating that a construction that excludes the preferred embodiment "is rarely, if ever correct and would require highly persuasive evidentiary support"). This is no

exception. Claim 1 requires "during formation of said gate lines, connecting one end of each gate line directly to a shorting element and another end of each gate line to a shorting element via a protection element." The shorting and protection elements are on layers above the gate lines and are not deposited until after the gate lines are deposited and etched. If the claim phrase were construed as LGD argues, the preferred embodiments shown in Figures 4 and 9 would be erroneously excluded from the scope of the claims.

LGD also argues that CMO's construction makes no distinction between gate and source line formation, but that is incorrect. Gate line formation typically begins first (7:49-53), and source line formation begins at a later step. The formation of the gate and source lines may or may not be completed at the same time—the patent does not have an artificial temporal limitation and covers the various possibilities known to those of skill in the art. 7:66-8:2. In any event, the constructions are distinct, even if in some embodiments the manufacturing stages in which the gate lines are formed and connected overlap or are the same as the manufacturing stages in which the source lines are formed and connected. The Court should reject LGD's flawed construction and construe this claim phrase to mean "during the manufacturing stages in which the gate lines are formed and connected."

**b. Shorting element (Claim 1) (JCC Ex. T, p. 2)**

LGD's construction for the term "shorting element" relies on a dictionary definition (LGD Br. at 75-76), but it is from the wrong context. The shorting element in the '923 patent has nothing to do with an accidental connection or "points on a circuit between which the resistance is normally much greater," as indicated by LGD's selected definition. In addition, LGD's construction adds the word "pattern," for which there is no specification support. Also, LGD's proposed construction makes no sense if it is substituted into the claims for "shorting element."

One of ordinary skill in the art understands what a shorting element is. The "Background Art" portion of the specification explains that because the shorting bars connect the gate and source electrodes, the gate and source electrodes remain at the same potential, which prevents

any voltage differentials from occurring across the gate and source electrodes and the shorting elements. *See, e.g.*, 1:55-58; 1:64-2:3. The patent does not describe the shorting elements in terms of "low resistance," and LGD's introduction of that terminology begs confusion with the claim term "resistive protection element." The Court should reject LGD's attempt to add limitations and confusion to this claim term, and the plain meaning of "shorting element" should apply.

**c. Electrically coupling said shorting elements (Claim 1) (JCC Ex. T, p. 4)**

LGD's proposed construction clearly attempts to add an unwarranted limitation to the above claim term. LGD Br. at 76. LGD proposes "electrically connecting the shorting element without intervening protection elements" when the claim language is "electrically coupling said shorting elements." The claims use the word "comprising" and are thus open-ended. *See AFG Indus. Inc. v. Cardinal IG Co.*, 239 F.3d 1239, 1244-45 (Fed. Cir. 2001) (holding that "comprising" is an "open" transition phrase" that may be used in claims to "cover devices that employ additional, unrecited elements") (citing *Moleculon*, 793 F.2d 1261, 1271). Adding "without intervening protection elements" is improper.

LGD's argument that the shorting elements are connected through the gate/source lines makes no sense—those connections are described in the "forming" limitations. The '923 specification provides an example in one embodiment where the shorting elements are connected with vias (6:7-8), but there is no limitation on how the shorting elements must be connected. 7:66-7:2. One of skill in the art would understand that the connection can be direct or indirect.

**d. Protection element (Claim 1) (JCC Ex. T, p. 3)**

LGD's construction of "protection element" seeks to add the limitations of "designed to" and "to allow for testing." LGD Br. at 77. There is no support for this in the claims, and it is improper to import limitations from the specification. *CollegeNet, Inc. v. ApplyYourself, Inc.*, 418 F.3d 1225, 1231 (Fed. Cir. 2005) ("In examining the specification...this court will not at any time import limitations from the specification into the claims.") (quoting *Teleflex, Inc. v. Ficosa*

*N. Am. Corp.*, 299 F.3d 1313, 1326 (Fed. Cir. 2002)). In addition, LGD's construction is improperly more limiting than the express disclosure of the specification. The '923 specification describes using protection elements to provide ESD protection during the different stages of the manufacturing process (including, *e.g.*, wirebonding the TFT switch array to peripheral driver circuits), not just to allow for testing. 7:49-52.

LGD argues that CMO's construction of "protection element" could include "shorting element," but these are two different elements. One of the skill in the art would understand that a protection element is not a shorting element from the context of the specification. For example, the specification states that "[t]he resistive protection elements 54, 58 provide current paths for leaking electrostatic charges collected by the gate and source lines 24 and 26...." 5:60-64. Although a short would provide a current path, it would not "leak" electrostatic charges—it would provide an immediate discharge and thus not be a protection element. One of ordinary skill in the art would understand CMO's construction "element protecting from electrostatic discharge (ESD)" as appropriate. If the Court thinks that further specification of this term is necessary, CMO proposes that "protection element" be construed to mean "element providing a current path to leak electrostatic charges." *See* 5:60-64.

#### 4. U.S. Patent No. 5,619,352 (JCC Ex. R)

##### a. **A layer of a birefringent material (Claim 3) (JCC Ex. R, p. 1)**

LGD attempts to parlay an isolated passage from the Summary of Invention section of the '352 patent into a requirement that the claimed compensator must always be positively birefringent: "The compensator design of this invention, which includes a positively birefringent twisted and/or splayed O-plate layer...." LGD Br. at 78 (citing 10:51-53). This sentence merely describes one embodiment (design) of the invention as including a positively birefringent twisted and/or splayed O-plate layer. The courts have repeatedly warned against limiting a claim to embodiments described in the specification. *Phillips*, 415 F.3d at 1323 (en banc).

Additionally, this sentence must be considered in the context of the patent disclosure as a whole. *Rambus Inc. v. Infineon Techs. Ag*, 318 F.3d 1081, 1094 (Fed. Cir. 2003) ("While clear language characterizing 'the present invention' may limit the ordinary meaning of the claim terms...such language must be read in context of the entire specification and the prosecution history."). The Detailed Description discusses use of a negative C-plate: "[i]n general, O-plate compensators may also include A-plate and/or negative C-plate as well as O-plates." 12:60-61. Additionally, the specification states that a compensator should have complementary optical symmetries to the liquid crystal material that it is compensating. 10:16-20. Thus, if the liquid crystal material has positive birefringence, then it is common practice in the art to use a compensator with a negative birefringence and vice versa. Yeh Decl. ¶ 6. Taken as a whole, the '352 patent is not limited to just positively birefringent O-plates.

LGD points to statements made in the prosecution of the parent '603 patent about O-plates being positively birefringent and the detrimental effect of negative birefringent compensators. LGD Br. at 79. The claims that were being discussed in these passages of the prosecution explicitly recited positively birefringent O-plates. Joint Ex. R-1 (8/23/95 Amendment, at pp. 2-5). LGD's cited passages do not limit a claim that recites a birefringent material without further qualification, such as claim 3 of the '352 patent. *ResQNet.com, Inc. v. Lansa, Inc.*, 346 F.3d 1374, 1383 (Fed. Cir. 2003) ("Although a parent patent's prosecution history may inform the claim construction of its descendent, the [parent patents'] prosecution history is irrelevant to the meaning of this limitation because the two patents do not share the same claim language."). Furthermore, the recitation of positively birefringent O-plates in the parent '603 patent and the omission of this language from the '352 claims indicates the '352 claims should not be so limited.

LGD further states that the embodiments are directed to positively birefringent material. LGD Br. at 80. Once again, the '352 patent also contemplated other types of compensator material such as negatively birefringent C-plates. 12:60-61.

In an attempt to interject into the claims yet another improper limitation, "uniaxial or near uniaxial," LGD again cites a passage from the Summary section of the '352 patent. LGD Br. at 80. However, this section merely notes that on a microscopic scale the compensator film is uniaxial or near uniaxial. By contrast, the '352 specification also states that a goal of the invention is to provide a compensator which has a desired biaxial symmetry. 10:44-45. Next LGD crops a passage from the '352 patent which states that a compensator should have complimentary optical symmetries to the liquid crystal layer, and makes an unsupported statement that liquid crystal materials are uniaxial. LGD Br. at 80. This is again contrary to the teachings of the '352 patent which describes liquid crystal material as being biaxial, not uniaxial: "[i]t is believed that this is true because **biaxial** O-plates more closely approximate the symmetry of an energized twisted nematic liquid crystal layer." 10:37-40 (emphasis added); *see also* 9:53-67. Collectively, these passages in the '352 patent teach that the compensator is uniaxial or nearly uniaxial in character on a microscopic level but on a macroscopic scale more closely approximates a biaxial material.

The claims recite a birefringent material without any further qualification. The claims should not be narrowed to specific embodiments discussed in the specification. *DSW, Inc. v. Shoe Pavilion, Inc.*, No. 2008-1085, 2008 WL 3842898 (Fed. Cir. Aug. 19, 2008) ("Moreover, when claim language is broader than the preferred embodiment, it is well-settled that claims are not to be confined to that embodiment."). CMO's construction, which follows the definition explicitly provided by the '352 patent, should be adopted.

**b. Tilt angle varies along an axis normal to said layer (Claim 3) (JCC Ex. R, p. 2)**

LGD points to a statement made during prosecution of the '352 patent as an alleged admission that the claims are limited to an angle between 25° to 65°. LGD Br. at 81. Conveniently cropped from LGD's cited passage is the last portion. The entire passage reads: "A further distinction between a compensator in accordance with any of claims 5, 6 and 7 and Heynderickx et al. is that the tilt angle is substantially greater than zero; 'between approximately

25 degrees and approximately 65 degrees.' (See amended claim 5)."<sup>1</sup> Joint Ex. R-1 (1/22/96 Amendment, at p. 9 (emphasis added)). Claim 5 (now claim 2) recites an angle limitation between 25 and 65 degrees. The portion of the cited passage that mentioned a specific tilt angle range related to pending claim 5: "[s]ee amended claim 5." Claim 6, now claim 3, did not, and does not have such a limitation. The claims speak for themselves and should not be limited by a generalized statement made during prosecution. *Rambus*, 318 F.3d at 1090 ("The claim language itself controls the bounds of the claim, not a facially inaccurate remark made during prosecution."). *See also Elbex Video, Ltd. V. Sensormatic Elecs. Corp.*, 508 F.3d 1366, 1374 (Fed. Cir. 2007) ("For a prosecution statement to prevail over the plain language of the claim, the statement must be clear and unmistakable such that the public should be entitled to rely on any definitive statements made during prosecution.").

The independent claims cover different inventive embodiments. "Claims 6 and 7 have been amended into independent form and, together with amended claim 5, specify three embodiments of a compensator in accordance with the invention." Joint Ex. R-1 (1/22/96 Amendment, at p. 10). The limitations of the embodiment recited in claim 2 should not be imported into the inventive embodiment covered by claim 3.

### **5. U.S. Patent No. 6,008,786 (JCC Ex. S)**

As a preliminary matter, LGD inappropriately attempts to label the '786 patent as "gamma correction" without explanation. LGD Br. at 82. The '786 patent primarily concerns an LCD technology of relative color compensation for a variation in intensity between the colors due to wavelength dependent differences in transmissivity, including delaying the signal for a color not compensated for this reason. "Gamma correction" relates to overall light intensity of a video signal. *See, e.g.*, Ex. S-2 (Haskell et al, Digital Video at 85 (1997)). LGD's labeling of the '786 patent introduces confusion, and it should be ignored.

#### **a. Changing the level of gray scale data signals for at least one color relative to the other colors to a different gray scale level (Claim 1) (JCC Ex. S, pp. 2, 5, 8, 10)**

LGD addresses two disputes between the parties on this limitation, but it mischaracterizes

the first dispute with an overbroad argument that leads to an inaccurate construction, and in the second dispute, attempts to import a limitation, which leads to further error.<sup>12</sup>

First, LGD argues that the '786 patent does not cover changing the gray scale data signals for all of the colors (*e.g.*, red, green, and blue) for any reason (LGD Br. at 84-85). This ignores the claim language and attempts to introduce an erroneous negative limitation. The claims cover changing one color relative to another for "wavelength related differences in transmissivity." 6:21-26. They do not exclude changing all three colors for other reasons, and it would be improper to import such a limitation because the claims use the word "comprising" and are thus open ended. *See AFG Indus.*, 239 F.3d at 1244-45. The claims require changing a color relative to another to correct transmissivity differences between the colors, but all three colors still can be changed in a prior or subsequent step for other reasons. LGD's citation to *SciMed Life Systems, Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1343 (Fed. Cir. 2001) is similarly inapt, because the prior art described in the '786 patent involves both a different correction and different structures to accomplish that correction.

Second, LGD argues to limit claim 1 to a particular manner of correction—"adding or subtracting compensation values." LGD Br. at 85-86. LGD's construction is incorrect because it imports a specific limitation into the claims, violates principles of claim differentiation, and excludes a preferred embodiment expressly described in the specification.

LGD's construction would add the concept of a "compensation value." It is improper to read a limitation from the specification into the claims. *CollegeNet*, 418 F.3d at 1231. Here, LGD's proposed construction would do just that. The independent claims do not include the specific detail of a "compensation value," and adding that specific limitation improperly imports

---

<sup>12</sup> Versions of this claim language appear in claims 1, 5, 7 and 12. In claim 1, the claim language is in the context of means-plus-function "computing means" and in the other claims, the language does not appear in the means-plus-function context. LGD acknowledges that the similar claim language in claims 5, 7 and 12 should be construed consistently with general principles discussed here for the language of claim 1. LGD Br. at 84, n.13. LGD's attempt to read a limitation in from the specification is improper in either context.

a limitation from an embodiment in the specification into the claims.

Furthermore, LGD's construction violates principles of claim differentiation. Claim differentiation teaches that dependent claims should be construed more narrowly than the independent claims from which they depend. *AK Steel Corp. v. Sollac and Ugine*, 344 F.3d 1234, 1242 (Fed. Cir. 2003) ("Under the doctrine of claim differentiation, dependent claims are presumed to be of narrower scope than the independent claims from which they depend."). Claims 4, 6, and 11 are all dependent claims that depend from independent claims 1, 5, and 7, respectively, and so dependent claims 4, 6, and 11 should be narrower than the corresponding independent claims. All three dependent claims expressly include the specific limitation of the "addition or subtraction." If the "addition or subtraction" concept were added to the independent claims, the same language in the dependent claims would essentially be redundant.

Moreover, LGD's proposed construction would improperly exclude a preferred embodiment. A construction that excludes a preferred embodiment is rarely if ever correct. *Vitronics*, 90 F.3d at 1583. Here, the specification expressly addresses how the gray scale signals values are corrected and states "[w]ith the method of the subject invention, only an additional circuit such as a computing circuit, is needed to effectively correct the differences in the transmissivity/applied voltage characteristics for colors." 5:58-61. Thus, the condition determination table 33 and addition/subtraction table 34 in Fig. 5 are just one possible implementation and not required by the claims. Other implementations of look up tables (LUTs) were well known to those of skill in the art. See, e.g., Ex. S-3 (Nelson et al, Digital Logic Circuit Analysis and Design at 358-59 (1995)). LGD's construction requiring adding or subtracting a compensation value would also require at least addition/subtraction table 34 and thus improperly excludes the preferred embodiment from 5:58-61 with only a computing circuit.

The claim language is specific and clear. As indicated in the Background Art section of the specification, one of ordinary skill in the art would have understood the terminology used in the claim language regarding changing the gray scale for a color relative to another for color dependent (wavelength related) differences in transmissivity. 2:1-19. The amount of light

transmitted through the LCD depends in part on the wavelength and accordingly the color. 2:1-5. In the example described, the color blue has a higher transmissivity (2:9-11) for a type of LCD, and without correction relative to the other colors, and "the picture on the whole takes on a bluish hue." 2:19-23. The patent describes correcting this color imbalance by correcting the blue color relative to the others. 4:7-8. The patent does not exclude other changes in addition to this correction. These claim phrases should be given their plain meanings, or alternatively, the Court should adopt CMO's constructions which, unlike LGD's, are true to the claim language.

**b. Delaying any uncorrected gray scale signal related to the other colors for the time delay caused by said corrected gray scale data signal being corrected (Claim 1) (JCC Ex. S, pp. 4, 6, 9, 11)**

While the same claim language in claims 1, 5, 7 and 12 should be construed consistently,<sup>13</sup> LGD's argument here improperly ignores the differences in the claim language and attempts to inject the claim language of claim 7 into the other claims. LGD Br. at 86. Claim 7 requires (i) calculation logic in a driver circuit for at least one color, and (ii) delay logic, without the calculation logic, in a driver circuit for at least one color that is uncorrected for color dependent differences in transmissivity. The other claims do not have both these specific requirements, and instead simply require correcting and delaying. In claims 1, 5 and 12, the same circuitry could be used to process all three colors and still meet the basic claim requirements of changing the gray scale data signals for one color relative to another for wavelength related differences in transmissivity and delaying the gray scale data signals for the color not changed relative to another for wavelength related differences in transmissivity. LGD's attempt to conflate the scope of the claims where there are clear differences in the claim language should be rejected.

Similar to its construction for the "changing" limitation in the section immediately above, LGD's construction here imports a limitation of "compensation value." The concept of a compensation value does not appear in the claim language, and it is therefore improper to add it.

---

<sup>13</sup> LGD acknowledges that the similar claim language in claims 5, 7 and 12 should be construed consistently with general principles discussed here for claim 1. LGD Br. at 86, n.14.

The claim language as written is clear—"delaying" is an easily understood term in this context, and changing it to "holding or deferring" only adds confusion. The plain meanings of these claim terms, as understood by one of ordinary skill in the art, should apply, or in the alternative, the Court should adopt CMO's proposed constructions that follow the clear claim language.

**c. Driver means/Data control means/Computing means/Buffer means/Adjusting means (Claim 1) (JCC Ex. S, pp. 1-5)**

LGD lumps all these claim terms together and argues that they should all be construed under 35 U.S.C. § 112, ¶ 6. As discussed in its opening brief, CMO agrees that § 112 applies to all of these terms except "buffer means," which recites sufficient structure—a buffer—to take it from the § 112 analysis. The parties dispute the appropriate corresponding structure for these means-plus-function terms, but LGD does not explain its selection of corresponding structure.

Regarding the construction for "adjusting means" in claim 3, LGD takes the position that it is indefinite without explanation. If LGD's argument for indefiniteness relates to the additional language in claim 3, which states that the adjusting means "is for the data control means to simultaneously output the corrected and uncorrected gray scale data signals," this language is a separate limitation of the data control means. The claimed function is the plain meaning, i.e., "to simultaneously output the corrected and uncorrected gray scale data signals," and the corresponding structure is buffer circuit 36 and equivalents.

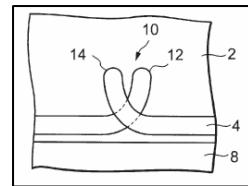
**6. U.S. Patent No. 7,280,179 (JCC Ex. W)**

**a. Forming a sealing member having a main portion enclosing a display region (Claim 1) (JCC Ex. W, p. 1) / Overlapping area extends along one side of the display region (Claims 1, 5, 8) (JCC Ex. W, p. 2)**

LGD proposes that these claim elements be respectively construed to include the following extraneous verbiage: "depositing sealant material parallel to the edge of the display region so that it encloses the display region," and "a segment of the sealing member main portion where sealant is applied on top of previously applied sealant material along one edge of the display region." However, the argument presented in LGD's Opening Brief undermines its own constructions and confirms that these claim elements should be given their plain and ordinary

meanings. In its Opening Brief, LGD correctly observes that the applicant distinguished the claimed invention from U.S. Patent No. 6,674,507 (the "Yoshizoe" patent) (Ex. W-4):

As shown in Fig 4 of Yoshizoe [reproduced to the right], the overlapping area extends away from the side of the display region, leaving a space between the overlapped sealant and along the side of the display region, as opposed to extending "along one side of the display region." LGD Br. at 88; *see also* Ex. W-5, at 13-14.



Thus, LGD reiterates the applicant's argument that while the overlapping sealant of Yoshizoe is "*away from the side* of the display region," the overlapping sealant of the '179 patent is "*along one side* of the display region." But LGD's constructions do nothing to clarify this point because this limitation—"along one side of the display region"—already exists in the claims as drafted. Indeed, the purpose of claim construction is to understand and explain the scope of the claims, not to convolute the claim language with additional unnecessary language. *See Embrex, Inc. v. Serv. Eng'g Corp.*, 216 F.3d 1343, 1347 (Fed. Cir. 2000). The claim language is clear on its face and does not require construction.

Citing the same prosecution history disclosure concerning Yoshizoe, LGD contends that the "main portion" of the "sealing member" must be "parallel to the edges of the display region." LGD Br. at 89. However, LGD does not, and cannot, identify any disavowal by the applicant of claim scope covering a main portion of the sealing member that is not parallel to the edges of the display region. To the contrary, the '179 specification specifically provides, "[t]he main portion 110a [of the sealing member], for example, is a sealing element that is rectangular in shape *or at least has four side walls*." 3:52-54 (emphasis added). Thus, a main portion of a sealing member with four non-parallel side walls that nonetheless encloses the display region satisfies the claim language, properly interpreted in light of the intrinsic record.

### III. CONCLUSION

For all of the foregoing reasons, CMO respectfully requests that the Court enter an order rejecting LGD's proposed constructions and adopting CMO's constructions for the disputed terms of the patents-in-suit.

OF COUNSEL:

Morgan Chu  
Jonathan S. Kagan  
Alexander C.D. Giza  
Adam Hoffman  
Irell & Manella LLP  
1800 Avenue of the Stars, Suite 900  
Los Angeles, California 90067-4276  
(310) 277-1010

Dated: September 4, 2008

POTTER, ANDERSON & CORROON LLP

By: /s/ Philip A. Rovner  
Philip A. Rovner (#3215)  
Hercules Plaza  
1313 N. Market St.  
P.O. Box 951  
Wilmington, Delaware 19899-0951  
(302) 984-6000  
provner@potteranderson.com

*Attorneys for Defendant  
Chi Mei Optoelectronics Corporation*

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE**

**CERTIFICATE OF SERVICE**

I, Philip A. Rovner, hereby certify that on September 4, 2008, the within document was filed with the Clerk of the Court using CM/ECF which will send notification of such filing(s) to the following; that the document was served on the following counsel as indicated; and that the document is available for viewing and downloading from CM/ECF.

**BY CM/ECF, HAND DELIVERY AND E-  
MAIL**

Richard E. Kirk, Esq.  
Ashley Blake Stitzer, Esq.  
The Bayard Firm  
222 Delaware Avenue  
Suite 900  
P.O. Box 25130  
Wilmington, DE 19899  
[rkirk@bayardfirm.com](mailto:rkirk@bayardfirm.com)  
[astitzer@bayardfirm.com](mailto:astitzer@bayardfirm.com)

**BY CM/ECF, HAND DELIVERY AND E-  
MAIL**

John W. Shaw, Esq.  
Karen L. Pascale, Esq.  
Young Conaway Stargatt & Taylor LLP  
The Brandywine Building  
1000 West Street, 17<sup>th</sup> Floor  
Wilmington, DE 19801  
[jshaw@ycst.com](mailto:jshaw@ycst.com)  
[kpascale@ycst.com](mailto:kpascale@ycst.com)

I hereby certify that on September 4, 2008 I have sent by E-mail the foregoing document to the following non-registered participants:

Gaspare J. Bono, Esq.  
Matthew T. Bailey, Esq.  
Lora A. Brzezynski, Esq.  
Cass W. Christenson, Esq.  
R. Tyler Goodwyn, IV, Esq.  
McKenna Long & Aldridge LLP  
1900 K Street, NW  
Washington, DC 20006  
[gbono@mckennalong.com](mailto:gbono@mckennalong.com)  
[mbailey@mckennalong.com](mailto:mbailey@mckennalong.com)  
[lbrzezynski@mckennalong.com](mailto:lbrzezynski@mckennalong.com)  
[cchristenson@mckennalong.com](mailto:cchristenson@mckennalong.com)  
[tgoodwyn@mckennalong.com](mailto:tgoodwyn@mckennalong.com)

Vincent K. Yip, Esq.  
Peter J. Wied, Esq.  
Jay C. Chiu, Esq.  
Katherine F. Murray, Esq.  
Ms. Denise Esparza  
Paul Hastings Janofsky & Walker LLP  
515 South Flower Street  
Los Angeles, CA 90071  
[vinytongip@paulhastings.com](mailto:vinytongip@paulhastings.com)  
[peterwied@paulhastings.com](mailto:peterwied@paulhastings.com)  
[jaychiu@paulhastings.com](mailto:jaychiu@paulhastings.com)  
[katherinemurray@paulhastings.com](mailto:katherinemurray@paulhastings.com)  
[deniseesparza@paulhastings.com](mailto:deniseesparza@paulhastings.com)

Ron E. Shulman, Esq.  
Julie M. Holloway, Esq.  
Wilson Sonsini Goodrich & Rosati  
650 Page Mill Road  
Palo Alto, CA 94304-1050  
[rshulman@wsgr.com](mailto:rshulman@wsgr.com)  
[jholloway@wsgr.com](mailto:jholloway@wsgr.com)

M. Craig Tyler, Esq.  
Brian D. Range, Esq.  
Wilson Sonsini Goodrich & Rosati  
8911 Capital of Texas Highway North  
Westech 360, Suite 3350  
Austin, TX 78759  
[ctyler@wsgr.com](mailto:ctyler@wsgr.com)  
[brange@wsgr.com](mailto:brange@wsgr.com)

*/s/ Philip A. Rovner*

---

Philip A. Rovner (#3215)  
Potter Anderson & Corroon LLP  
Hercules Plaza, 6th Floor  
P. O. Box 951  
Wilmington, DE 19899  
(302) 984-6000  
[provner@potteranderson.com](mailto:provner@potteranderson.com)

846666